

Into the unknown: Rethinking the relationship between synergy and uncertainty in mergers and acquisitions (M&A)

Alan Tait
University of Portsmouth, UK

Abstract

This paper attempts to rethink the relationship between synergy and uncertainty from one where synergy increases as uncertainty decreases to one where synergy itself is an inherently uncertain phenomenon. It looks at how past attempts to reduce uncertainty has not led conclusively to a corresponding increase in synergy. It also presents the complexity science Synergetics as a promising new lens with which to develop a perspective of synergy as a process of self-organization that is inherently uncertain. The paper concludes with some thoughts about further development.

Introduction

The problem of uncertainty in realising synergy in mergers and acquisitions (M&A) has been a long standing one with Ansoff (1965) having recognised the need to account for uncertainty when he introduced synergy and Kay and Diamantopolous (1987) highlighting that as uncertainty increases the level of synergy decreases. Since then, research into M&A has tried to find ways to reduce the uncertainty around the realisation of synergies. Yet uncertainty still persists. Performance outcomes remain uncertain with some M&A producing positive synergy gains for shareholders (Barragota and Markelevich, 2008), others producing negative synergy outcomes (Aureli, 2015; Rao-Nicholson *et al*, 2016) and others still producing no impact whatsoever (Aik *et al*, 2015; Kumar, 2009). Forecasts of the future remain uncertain with a great many firms overestimating future synergies and, consequently, overpaying for targets (Fu, Lin and Officer, 2013). Finally, competitive responses have stayed uncertain with some M&A leading to reduced competition and profit gains for all (Chatterjee, 1986; 1992; Clougherty and Duso, 2011) and others leading to increased competition and reduced firm performance (Keil, Laamanen, and McGrath, 2013).

All of this suggests that attempts to reduce uncertainty in order to enhance the chances of synergy realisation do not actually address the uncertainty of synergy in M&A. It also suggests that what may be needed is a fresh perspective that explicitly treats synergy as an inherently uncertain phenomenon. That is the purpose of this development paper which starts with the premise that synergy itself is an inherently uncertain phenomenon. The paper proceeds as follows. Firstly, it will examine more closely the inconclusiveness of attempts to reduce uncertainty in an effort to increase the chances of synergy. From there, a reconceptualisation of synergy as an inherently uncertain phenomenon will be suggested by highlighting the field of the complexity sciences known as Synergetics. Finally, the paper will highlight areas of further development.

Mainstream Approaches to the Relationship Between Synergy and Uncertainty

Uncertainty as Ambiguity

One way they have tried to do this has been to diagnose the problem of uncertainty as one of *ambiguity*. Here, uncertainty is introduced by managers who do not fully understand the concept of synergy (Porter, 1985; Ansoff and McDonnell, 1990; Campbell and Luchs, 1998). Consequently, managers have either defined potential synergy opportunities too narrowly or too broadly (Ficery, Herd, and Pursche, 2007). Defining synergy opportunities too narrowly involves managers focussing solely upon the cost savings that are projected to arise from an acquisition (cost synergies) since they are easier to identify and to quantify in monetary terms. In so doing, managers neglect potentially more valuable revenue gains that could accrue from an acquisition (revenue synergies) since these are much more difficult to identify and quantify. Defining synergy opportunities too broadly involves seeing everything as a potential synergy opportunity which introduces the possibility of identifying a ‘synergy mirage’ (Campbell and Goold, 1998; Fiorentino and Garzello, 2015). This is where the synergies present in a given acquisition opportunity are overestimated while the costs of realising them are underestimated and it can lead acquirers to overpay for acquisition targets and then not realise the anticipated cost savings or revenue gains.

Over the years, the response to this problem of ambiguity has been to identify various types of synergy as potential sources of cost and revenue synergies. The most common types identified have been: (1) the more efficient use of facilities (operating synergy) (Ansoff, 1965; Lubatkin, 1983; Porter, 1985; Chatterjee, 1986; Goold and Campbell, 2000; Clougherty and Dusi, 2011); (2) investment savings from using common manufacturing plants, raw materials, and R&D facilities (investment or financial synergy) (Ansoff, 1965; Lubatkin, 1983; Chatterjee, 1986); (3) knowledge sharing (knowledge synergy) (Porter, 1985; Goold and Campbell, 2000); (4) increased market power (collusive synergy) (Lubatkin, 1983; Chatterjee, 1986; Goold and Campbell, 2000; Clougherty and Duso, 2011); and aligned strategies (strategy synergy) (Ansoff and McDonnell, 1990; Goold and Campbell, 2000).

However, this increased clarity has not led to a corresponding increase in the ability of managers to accurately estimate the potential synergies of an impending acquisition. Recent research has shown that acquirers still overpay for targets on the basis of synergy estimations (Harford *et al*, 2012; Lin, Officer, and Zou, 2011; Fu, Lin and Officer, 2013). Moreover, research by Ismail (2011) and Di Guili (2013) has shown that, by paying for acquisitions with stocks and shares, acquiring managers demonstrate a lack of certainty regarding their own synergy estimates. Hence, reframing the problem of uncertainty as one of ambiguity has not provided a satisfactory solution. Yet, uncertainty is not only perceived as an ambiguity problem.

Uncertainty as Information Asymmetry

Another way in which the problem of uncertainty has been viewed is as an *information problem*. Here, attention is directed at the asymmetrical relationship in the information possessed by the parties involved in a merger or acquisition whereby one party has better information than the other (Yook, Gangopadhyay, and McCabe, 1999). In M&A research, this has referred predominantly to the asymmetry that exists between the acquiring firm and the target firm where those in the target firm have more accurate information about the firm’s actual value than the acquirer (Cuypers, Cuypers, and Martin, 2016; Goktan, 2012). This

asymmetry becomes more acute when there is a physical distance between the acquiring firm and the target (Basu and Chevrier, 2011). It also introduces a number of uncertainties including uncertainty surrounding making an accurate estimation of the target firm on the part of the acquirer and uncertainty regarding how the returns will be divided between the acquirer and target (Goktan, 2012).

The response to this problem has been to make the relationship more symmetrical by improving the quality of information that the acquirer possesses about the target by improving access to information. Two ways which are suggested are the use of toeholds and a focus upon local target. Toeholds are non-controlling stakes in a company often used as a precursor to an acquisition (often a hostile one). Such toeholds offer an opportunity for the potential acquirer to gain access to private information about the target rather than relying upon publicly available information (Povel and Sertsios, 2014). The focus on local targets is seen as a way of reducing physical distance between the acquirer and the target and therefore reducing information asymmetry by providing more opportunities for more private information exchange between the parties (Basu and Chevrier, 2011).

Yet, much like the attempts to address uncertainty as a problem of ambiguity, these suggested solutions have not made valuations more certain or given more certainty to investors. For instance, the use of 'toeholds' have often not produced the anticipated returns from an acquisition (Ettinger, 2009) and, indeed, have introduced their own uncertainties such as the potential defensive response by the management of the target (Strickland, Martin and Cotter, 2010). In addition, research by Kim and Chun (2016) has shown that, while physical distance does have a negative impact upon the returns from acquisitions, overcoming information asymmetry by focussing on local targets does not guarantee acquisition success. Thus treating the problem of uncertainty as one of information asymmetry has not made M&A more certain. Other researchers, however, have perceived the problem of uncertainty differently.

Developing a view of synergy as an uncertain phenomenon

The Promise of Synergetics

One promising avenue for developing such a perspective comes from the complexity science known as Synergetics. Synergetics is a field of Complexity Theory which has transcended its origins in theoretical physics to become an interdisciplinary field investigating self-organization "from a unifying point of view" (Haken, 2004, p.v). In particular, it seeks to identify "common features of systems which acquire ordered states out of disordered states through the process of self-organization." (Haken, 1985, p.205). This process describes how complex systems composed of individual elements and operating far-from-equilibrium can form structures spontaneously and naturally (Kauffman, 1995; Haken, 2004). In particular, the process of *self*-organization, unlike organization, does not rely upon external forces or agents to form structures but instead involves causal dynamics that "are "internal" to the parts (or participants) and their interactions" (Corning, 2003, p.287). As a result, systems, "acquire their order or structure without specific interference from the outside" (Haken, 1985, p.205) and in a way that cannot be determined by any of the agents in advance. Thus, by studying self-organisation as a process that produces inherently uncertain outcomes, Synergetics is, in the first instance, a promising new avenue for developing a view of synergy as an uncertain phenomenon.

The process proceeds as follows. Changes in ‘control parameters’ – external environment influences like the amount of energy flowing into a system – induce random fluctuations which, in a manner following the property of sensitive dependence on initial conditions, are then amplified exponentially to point where the system becomes unstable. At this instability point a dynamic of circular causality kicks in. On the one hand, joint actions – including competition and cooperation – between the parts produce patterns in the form of ‘order parameters’ which are parameters that describe the order of the system. In turn, these order parameters govern the behaviour of the parts via the *slaving principle* which reduces the amount of freedom the parts have (Haken, 1985; 2004; 2006; Haken *et al*, 1999; Portugali and Haken, 1992).

The potential of this theory as a way of metaphorically reconceptualising the relationship between synergy and uncertainty is enhanced by the fact that Synergetics has implied that synergy is just such a process of self-organization. This is implied in the following quote by Haken (2004):

“While I was starting from physics and was led into questions of chemistry and biology, quite recently colleagues of some other disciplines have drawn my attention to the fact that a conception, called synergy, has long been discussed in fields such as sociology...Here for instance the working together of different parts of the company, to improve the performance of the company, is studied. It thus appears that we are presently from two different sides digging a tunnel under a big mountain which has so far separated different disciplines, in particular the “soft” from the “hard” sciences.” (pp.352-3).

This quote implies that synergy as a process of working together is, itself, a process of self-organization which produces structures spontaneously through the interaction of participants. As such, those structures are uncertain in advance.

Further Development of the Paper

The paper will be developed further in a number of ways: (1) by reviewing the different ways in which uncertainty has been conceptualised in management to show that mainstream attempts to reduce uncertainty in M&A research fail to tackle inherent uncertainty; (2) by incorporating a discussion of risk into the mainstream approaches to reducing synergy; (3) by imposing the constructs of Synergetics upon the classic case of the Royal Bank of Scotland’s takeover of NatWest to tease out an initial view of synergy as an inherent phenomenon; and (4) to discuss the implications of this initial view for the practice of pursuing synergy through M&A and for research into synergy M&A.

References

- Aik, N.C., Hassan, M.K. and Hassan, T. (2015). Productivity and Spillover effects of mergers and acquisitions in Malaysia. *Management Research Review*, 38 (3): 320-344.
- Ansoff, I. (1965). *Corporate Strategy: An Analytic Approach to Business Policy For Growth and Expansion*. Penguin Books: Middlesex.
- Ansoff, H.I. and McDonnell, E.J. (1990). *Implanting Strategic Management, Second Edition*. New York: Prentice Hall.
- Aureli, S. (2015). Performance of unlisted Italian companies acquired by multinationals from emerging markets: The case of Indian acquisitions. *Journal of Change Management*, 28 (5): 895-924.
- Barragato, C.A. and Markelevich, A. (2008). Earnings quality following corporate acquisitions. *Managerial Finance*, 34 (5): 304-315.
- Basu, N. And Chevrier, M. (2011). Distnace, information asymmetry and mergers: evidence from Canadian firms. *Managerial Finance*, 37 (1): 21-33.
- Campbell, A. and Goold, M. (1998). *Synergy: Why Links Between Units Often fail and How to Make Them Work*. United Kingdom: Capstone.
- Campbell, A. and Luchs, K.S. (1998). *Strategic Synergy, Second Edition*. Boston: Cengage.
- Chatterjee, S. (1986). Types of synergy and economic value: the impact of acquisitions on merging and rival firms. *Strategic Management Journal*, 7 (2): 119-139.
- Chatterjee, S. (1992). Sources of value in takeovers: Synergy or restructuring – implications for target and bidder firms. *Strategic Management Journal*, 13 (4): 267-286.
- Clougherty, J.A. and Duso, T. (2011). Using rival effects to identify synergies and improve merger typologies. *Strategic Organization*, 9 (4): 310-335.
- Corning, Peter (2003). *Nature's Magic: Synergy in Evolution and the Fate of Humankind*, Cambridge: Cambridge University Press.
- Cuyppers, I.R.P., Cuyppers, Y. And Martin, X. (2016). When the target may know better: Effects of experience and information asymmetries on value from mergers and acquisitions. *Strategic Management Journal*, Accepted Article Online [available at: <http://onlinelibrary.wiley.com/doi/10.1002/smj.2502/pdf>] [accessed: 28/02/2016].
- Di Giuli, A. (2013). The effect of stock misevaluation and investment opportunities on the method of payment in mergers. *Journal of Corporate Finance*, 21: 196-215.
- Ettinger, D. (2009). Takeover Contests, Toeholds, and Deterrence. *The Scandinavian Journal of Economics*, 111 (1): 103-124.
- Ficery, K., Herd, T., and Pursche, B. (2007). Where has all the synergy gone? The M&A puzzle. *Journal of Business Strategy*, 28 (5): 29-35.
- Fiorentino, R. & Garzella, S. (2015). Synergy management pitfalls in mergers and acquisitions. *Management Decision*, 53 (7): 1469-1503.
- Fu, F., Lin, L., and Officer, M.S. (2013). Acquisitions driven by stock overvaluation: Are the good deals? *Journal of Financial Economics*, 109 (1): 24-39.
- Goold, M. and Campbell, A. (2000). Taking stock of synergy: a framework for assessing linkages between businesses. *Long range Planning*, 33 (1): 72-96.
- Goktan, M.S. (2012). How does information asymmetry affect the division of gains in mergers? *Managerial Finance*, 39 (1): 60-85.
- Haken, H. (1985). Synergetics – an Interdisciplinary Approach to Phenomena of Self organization. *Geoforum*, 16 (2): 205-211.
- Haken, H., Schanz, M., and Starke, J. (1999). Treatment of combinatorial optimization problems using selection equations with cost terms. Part I. Two-dimensional assignment problems, *Physica D*, 134: 227-241.
- Haken, H. (2004). *Synergetics: Introduction and Advanced Topics*, Berlin; Heidelberg; New York; Hong Kong; London; Milan; Paris; Tokyo: Springer.

- Haken, H. (2006). Synergetics of brain function. *International Journal of Psychophysiology*, 60 (2): 110-124.
- Harford, J., Humphery-Jenner, M., and Powell, R. (2012). The sources of value destruction in acquisitions by entrenched managers. *Journal of Financial Economics*, 106 (2): 247-261.
- Ismail, A. (2011). Does the Management's Forecast of Merger Synergies Explain the Premium Paid, the Method of Payment and Merger Motives? *Financial Management*, 40 (4): 879-910.
- Kauffman, Stuart (1995). *At Home in the Universe: The Search for Laws of Complexity*, London: Penguin.
- Kay, N.M. and Diamantopoulos, A. (1987). Uncertainty and synergy: Towards a formal model of corporate strategy. *Managerial and Decision Economics*, 8 (2): 121-130.
- Keil, T., Laamanen, T., and McGrath, R.G. (2013). Is a Counterattack The Best Defense? Competitive Dynamics Through Acquisitions. *Long Range Planning*, 46 (3): 195-215.
- Kim, T-N and Bumseok, C. (2016). Determinants of acquirer-target distance in M&A. *Managerial Finance*, 42 (2): 95-117.
- Kumar, R. (2009). Post-merger corporate performance: an Indian perspective. *Management Research News*, 32 (2): 145-157.
- Lin, C., Officer, M.S. and Zou, H. (2011). Directors' and officers' liability insurance and acquisition outcomes. *Journal of Financial Economics*, 102 (3): 507-525.
- Lubatkin, M. (1983). Mergers and the Performance of the Acquiring Firm. *Academy of Management Review*, 8(2): 218-225.
- Porter, M.E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- Portugali, J. and Haken, H. (1992), "Synergetics and Cognitive Maps", *Geoforum*, Vol.23 (2), pp. 111-130.
- Povel, P. and Sertsios, G. (2014). Getting to know each other: The role of toeholds in acquisitions. *Journal of Corporate Finance*, 26: 201-224.
- Rao-Nicholson, Salaber and Cao (2016). Long-term performance of mergers and acquisitions in ASEAN countries. *Research in International Business and Finance*, 36: 373-387.
- Strickland, D., Martin, D.R., and Cotter, J.F. (2010). Toeholds as an M&A Strategy? *Journal of Corporate Accounting & Finance*, 21 (5): 57-61.
- Yook, K.C., Gangopadhyay, P. and McCabe, G.M. (1999). Information Asymmetry, Management Control, and Method of Payment in Acquisitions. *Journal of Financial Research*, 22 (4): 413-427.